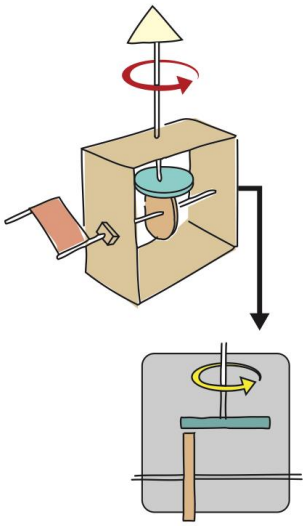
OUR SPACE
OUR FUTURE

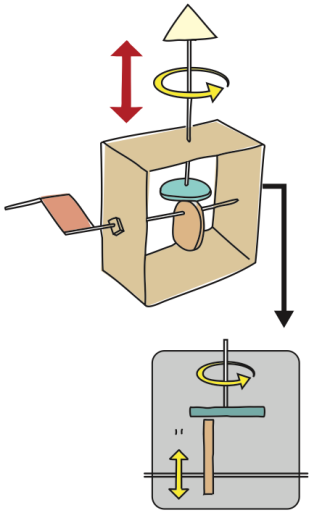
GEARS AND MECHANISMS

Goal of this activity is study, through concrete tests, how **motion conversion mechanisms** works.
You have to build at least 5 different types of mechanism that can commute a simple rotary motion in other kind of motions. You can be inspired by one of the following schemes.

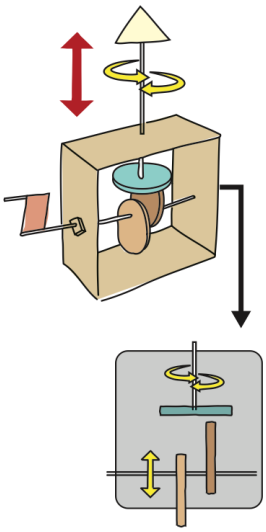
90° reversed rotation



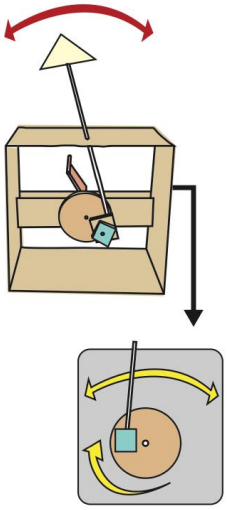
Roto-translation



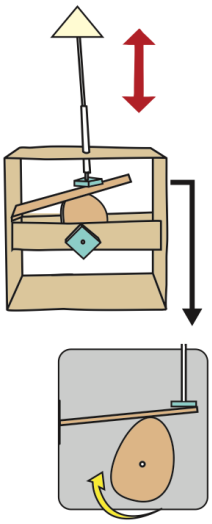
Rototranslation with change of direction



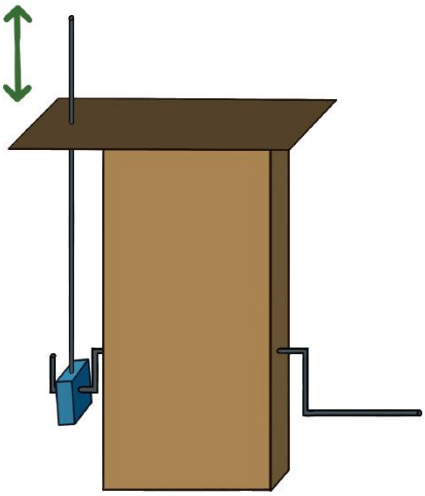
Swing



Translation



Translation with slider-crank



To do this activity you can use:

- cardboard
- boxes
- flexible iron wire
- bottle caps
- glue
- skewers
- small pieces of polystyrene
- twine
- scotch tape
- scissors
- telephone

For your space mission, you also have to motivate your mission by choosing between the following features:

- the **goal** of space mission, choosing also who's the **sponsor** of the mission, such as:
A specific scientific lab
Companies for a specific production
Military
Commercial and telecommunication services
Space agencies for space exploration

- **specific feature** of the spacecraft, such as:
landing on a planet
landing on the ground
return ditching
heat shield
parachutes
rockets
pilot rockets
remote piloting

- **equipment on board** (at least one between the following) in relation to the goal of space mission
multispectral camera
thermal detector
water detector at all stages

radiation analyzer
atmosphere analyzer
sample analyzer

- the **name** of space mission.

Once that you choose this parameters, you can create your mechanism. .

Recording your tests and then make a video at least of 3 minutes which you present your mission and show what you have done and the mechanism you had create.

With this video, you'll show your work to your class and we'll comment together your choices and how to improve what you have done.